REMARKS

I.   Status of the Claims

Claims 1-110 were currently pending in the application prior to this amendment.

Claims 1-110 have been rejected.

New claims 111 and 112 have been added and are now presented for consideration by the Examiner. No new matter has been added by this amendment.

Applicants respectfully request reconsideration of the originally filed claims, and consideration of the new claims, in view of the following remarks:

II.   Rejections Under 35 U.S.C. §102(a):

Claims 1-3, 5, 7-13, 15, 17-23, 25, 27-30, 63-64, 66, 68-72, 74, 76-80, 82 and 84-86 are rejected under 35 U.S.C. §102(a) as being anticipated by USP 6,216,167 B1 to Momirov (hereafter, "Momirov").

Claims 32-40, 42-50, 52-60, 88-93, 95-100 and 102-107 are rejected under 35 U.S.C. §102(a) to Momirov.

Initially, Applicants believe that the Examiner actually meant to reject these claims under 35 USC § 102(e), not 102(a), in view of both the filing date (June 29, 1998) and issue date (April 10, 2001) in Momirov.

The present invention, in at least one embodiment, is directed to an improved system for routing IP packets in a multicast system. Typical multicast systems may experience delays in delivering information to a client terminal caused by the need for client device to access various cross-reference tables in order to determine the appropriate selection criteria for data packets corresponding to information desired by a receiving terminal. The present invention causes additional IP, MAC address and other protocol related information to be included in the packet header so that the receiving terminal may use the header as a selection criteria without having to access cross reference tables, thereby reducing network overhead.

Applicants disagree with the Examiner's contention that Momirov anticipates the claimed invention. Momirov is a system for routing information to various output queues or "taps" in order to optimize multicast message delivery. A standard packet is separated into "cells," and each cell receives forwarding control information regarding a particular output tap. This information is then used to reassemble a packet prior to forwarding to an I/O card for broadcast (in the case of multicast data). Applicants respectfully contend that the Examiner has not demonstrated that Momirov anticipates each and every limitation in the independent claims, and therefore, the 35 USC § 102 rejection is invalid under U.S. patent law.

The Examiner makes general reference to various sections in Momirov (e.g., column 4, line 53 to column 6, line 55) that describe the segmenting, routing and reformation of data packets. However, there is nothing in the citations relied upon by the Examiner that demonstrates generating an address value based on the IP or MAC address, formatting the address value and populating the formatted address value into a field of the header that will be used as a selection criteria by a receiving terminal as explicitly required by claim 1. There is no recitation or implication in Momirov of a receiving terminal. It appears that all mapping and routing actions in the cited reference are related to output functions taking place within a single device (e.g., an Internet switch), and do not correspond to client terminals that desire to receive specific elements of multicast information. Further, it is not apparent that other limitations in the claims, for example claims 8 and 9, are anticipated by Momirov. There is no recitation or implication in Momirov that the IP or MAC address, or a subset thereof, has been operated upon by a bitwise logic function or a hashing function. Momirov column 10, line 27-column 11, line 8 merely discusses different formats for a packet address, and column 2, lines 14-55 is a generalized summary of the invention, and does not recite or imply the use of hashing with respect to the present invention.

In view of the previous remarks, applicants believe that the aforementioned claims are not anticipated by the cited references, and therefore, are in condition for allowance.

III.   Rejections Under 35 U.S.C. §103(a):

Claims 4, 6, 14, 16, 24, 26, 65, 67, 73, 75, 81, 83 and 109 are rejected under 35 U.S.C. §103(a) to Momirov, as applied to claims 1-3 and 5 above and in further view of USP 6,226,291 B1 to Chauvel et al. (hereafter, "Chauvel").

Claims 41, 51, 61, 94, 101, 108 and 110 are rejected under 35 U.S.C. §103(a) as unpatentable over Momirov, as applied to claims 32 and 33 above, and further in view of Chauvel.

Claims 31, 62 and 87 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Momirov, as applied to claims 1-2 and 32 and further in view of USP 5,544,161 A to Bigham (hereafter, "Bigham").

Applicants respectfully contend that all of the obviousness rejections in this Office Action lack adequate motivation as required under US patent law. The motivation offered in these rejections does not rely upon independent support (e.g., a citation in the secondary reference, an outside resource, etc.), and seems to instead mirror the benefits recited by the present invention. Therefore, this motivation is deemed to constitute hindsight reconstruction by the Examiner (e.g., the Examiner combined the references only because of the teaching of the present invention), and therefore, Applicants believe the rejections to be invalid.

In addition, Chauvel is a digital packet parser system usable, for example, as a decoder for digital television. The system may route packets depending on a flag that indicates various conditions (e.g. errors, more processing required, etc.). The Examiner relies upon the Chauvel reference to teach the processing and routing of MPEG2 information. Chauvel does not cure the deficiencies described above in respect to the Momirov reference, and therefore, in addition to lacking an adequate motivation to combine the two references, the rejection is also invalid for at least the reasons discussed above in regard to the 35 USC § 102 rejection.

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Bigham is a digital distribution system that consolidates a plurality of signals received via asynchronous transport mode (ATM), and then transmits these consolidated signals for local distribution over a hybrid-fiber-coax local loop. The section relied upon by the Examiner (column 32, lines 8-21) discloses how a digital entertainment terminal (DET) may communicate wirelessly via IR communication with a receiving device, such as a personal digital assistant. However, claim 31 requires that the device of claim 21 be a wireless handheld terminal, wherein the device of claim 21 is performing the method of claim 1. In Bigham, the DET is the device actually handling the processing and routing of data, and according to column 29, line 61 to column 30, line 6, this device is a connected via a coaxial able drop (hardwired) to the network. Therefore, in addition to the rejection lacking an adequate motivation to combine the two references and being invalid for at least the reasons discussed above in regard to the 35 USC § 102 rejection, the rejection is also invalid because the wireless communication device in Bigham is merely a receiving device, and is not employed to process and route data as required by claims 21 and 31 of the present invention.

In view of the previous remarks, applicants believe that the aforementioned claims are not obvious in view of the cited references, and therefore, are in condition for allowance.

IV.   New Claims:

Support for new claims 111 and 112 is found on page 3, paragraph 0009 of the specification. It appears that numerous cross-reference tables (e.g. egress path tables, egress I/O interface tables, and other assorted look-up tables) are accessed in the process of directing packets to various output cards in Momirov. The use of these tables run contrary to purpose of the present invention, wherein address information usable by a client is added directly to the packet header to avoid the use of such tables.

In view of the above, Applicants believe that claims 111 and 112 are in condition for allowance.

CONCLUSION

Based on the foregoing amendments and remarks, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims and allowance of the application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. 13-4503, Order No. 4208-4028. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 13-4503, Order No. 4208-4028. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

Respectfully submitted,
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